IN THE SPECIFICATION:

The paragraph beginning at page 2, line 22 has been amended as follows:

One advantageous analysis is to adopt a single compartment model for the lung. FIG. 1 shows this model using symbols equivalent to an electric circuit, having a resistance 2 in series with a compliance 4 (the compliance can be a variable dependent on volume). This provides the equation

$$\cancel{P(t) = R \cdot \dot{V} + \frac{1}{C}\int_0^t \dot{V} dt + P(0) = R * \dot{V} + \frac{V(t)}{C} + P(0)} \qquad \cancel{(1)}$$

$$P(t) = R \cdot \dot{V} + \frac{1}{C(V)}\int_0^t \dot{V} dt + P(0) = R * \dot{V} + \frac{V(t)}{C} + P(0) \qquad (1)$$

wherein P is airway pressure, ~~V~~ V)(t) is lung volume, $\dot{V}$ is airway flow, R is resistance, ~~C~~ C(V) is compliance and P(0) is the start pressure.

The paragraph beginning at page 3, line 6 has been amended as follows:

Compliance ~~C~~ C(V) can be dependent on volume according to the equation

$$C(V) = C \cdot V^{1-b} \qquad (2)$$

wherein b represents the stress index and C is a constant.

Equations (1) and (2) can now be combined to a new equation

$$P(t) = R \cdot \dot{V} + \frac{V^b}{C} + P(0) \qquad (3)$$